



January 23, 2018

Michelle Kaysen
USEPA Region 5, Mail Code LU-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Fourth Quarter 2017 Progress Report, Hartford Petroleum Release Site, Hartford, Illinois

Dear Ms. Kaysen,

212 Environmental Consulting, LLC (212 Environmental) is submitting this quarterly report summarizing the progress and status of activities performed at the Hartford Petroleum Release Site (Hartford Site) on behalf of Apex Oil Company, Inc. (Apex) for the time-period between October 1, 2017 and December 31, 2017.

1. The following deliverables were submitted by Apex during the fourth quarter 2017:

- Apex provided the United States Environmental Protection Agency (USEPA) with estimates of the number of structures monitored and mitigated, as well as number of monitoring locations and extraction wells installed at the Hartford Site via email dated October 13, 2017.
- The *Third Quarter 2017 Sentinel Well Monitoring Summary Report* was submitted to the USEPA and Illinois Environmental Protection Agency (Illinois EPA) on October 31, 2017 via standard mail and electronic file sharing.
- The *Third Quarter 2017 Progress Report* was submitted to the USEPA and Illinois EPA on November 3, 2017 via email.
- An updated project calendar was submitted to the USEPA and Illinois EPA on November 22, 2017 via email.
- The *Response to Agency Comments regarding the Draft Proposed Multiphase Remedy Framework Remedial Objectives, Remediation Goals, and Performance Metrics, Hartford Petroleum Release Site, Hartford, Illinois* was submitted to the USEPA and Illinois EPA on December 1, 2017 via electronic file sharing.
- The *Summary of Soil Vapor Extraction System Expansion, Hartford Petroleum Release Site, Hartford, Illinois* was submitted to the USEPA and Illinois EPA on December 8, 2017 via electronic file sharing.
- Weekly Field Activity Reports were submitted to the USEPA and Illinois EPA during the fourth quarter 2017 via email.



MS. MICHELLE KAYSEN

January 23, 2018

PAGE 2

2. The following requests and notifications pertaining to activities at the Hartford Site were submitted by Apex during the fourth quarter 2017:
 - The USEPA and Illinois EPA were provided a request to extend the deliverable date for the *Response to Agency Comments regarding the Draft Proposed Multiphase Remedy Framework Remedial Objectives, Remediation Goals, and Performance Metrics, Hartford Petroleum Release Site, Hartford, Illinois* on November 3, 2017.
 - The USEPA and Illinois EPA were provided a request to reduce the frequency of in-home effectiveness monitoring within 105 West Cherry Street, 107 West Cherry Street, and 113 West Cherry Street from weekly to monthly. Approval of the modified monitoring frequency was provided by the USEPA on November 13, 2017.
 - The USEPA and Illinois EPA were provided notification regarding the scope of quarterly in-home effectiveness monitoring on November 30, 2017.
 - The USEPA and Illinois EPA were provided routine summaries of in-home effectiveness screening results during the fourth quarter 2017.
3. Apex participated in the following meetings and teleconferences during the fourth quarter 2017:
 - Community focus group meeting with the USEPA, Illinois EPA, and invited stakeholders was convened on October 17, 2017.
4. Apex completed the following in-home effectiveness monitoring activities:
 - Weekly in-home effectiveness monitoring was performed within eight structures at the Hartford Site throughout the fourth quarter 2017.
 - Additional in-home effectiveness monitoring within 105 West Cherry Street, 107 West Cherry Street, and 113 West Cherry Street was conducted during the fourth quarter 2017.
 - Quarterly in-home effectiveness monitoring was performed in 25 structures at the Hartford Site between December 4 and 8, 2017.
5. Apex completed the following dissolved phase investigation activities:
 - Quarterly manual fluid level gauging within 375 groundwater monitoring wells and multipurpose monitoring points was completed between October 4 and 6, 2017.
 - Groundwater samples were collected and analyzed from eight monitoring wells and multipurpose monitoring points during the fourth quarter 2017.
 - Fluid level data was downloaded from eight pressure transducers on October 19, 2017.
 - Removal of approximately 400 gallons of LNAPL from the Lube Cubes in operation at recovery wells RW-002 and RW-004A was completed on November 10, 2017.



MS. MICHELLE KAYSEN

January 23, 2018

PAGE 3

- Integrity testing of the Lube Cubes used to store recovered LNAPL was completed on December 5, 2017.
6. Apex completed the following operations, maintenance, and monitoring (OMM) activities with soil vapor extraction (SVE) system during the fourth quarter 2017:
- Routine monitoring within vapor collection system components was conducted during the fourth quarter 2017 including: (1) fluid level gauging; (2) measuring vacuum, air flow, and temperature; (3) measuring water flow rates from new and retrofitted extraction wells; and (4) screening total volatile petroleum hydrocarbon and fixed gas concentrations within operating SVE wells.
 - Routine operations within the vapor collection system components was conducted during the fourth quarter 2017 including adjustments to stingers and valve positions within individual wells, as well as sweeping of the horizontal transmission lines to remove accumulated groundwater.
 - Non-routine maintenance of the vapor collection system components was performed during the fourth quarter 2017 including silt removal from nineteen operating extraction wells and three segments of the horizontal transmission lines.
 - The wellhead completions and controls within fourteen SVE wells (HSVE-004D, HSVE-004R, HSVE-004S, HSVE-020D, HSVE-020S, HSVE-023S, HSVE-024D, HSVE-027D, HSVE-062, HSVE-064, HSVE-067, HSVE-070, HSVE-076, and HSVE-077) were retrofitted during the fourth quarter 2017.
 - The measuring point elevation was resurveyed within 29 modified vapor extraction wells on December 4, 2017.
 - Effectiveness monitoring for the vapor collection system was conducted within 171 nested vapor monitoring probes and multipurpose monitoring points screened between November 13 and 17, 2017.
 - Redevelopment of eight multipurpose monitoring points (MP-138 through MP-145) was conducted between December 6 and 8, 2017.
 - Routine OMM of the thermal treatment system components was performed throughout the fourth quarter 2017 including transport and discharge of accumulated groundwater at the Wood River Wastewater Treatment and removal of accumulated silt from the above ground vapor liquid separator.
7. Activities planned during the first quarter 2018 at the Hartford Site:
- Conduct routine and non-routine OMM of the vapor collection and thermal treatment components of the SVE system in accordance with the approved *Vapor Collection System Operation, Maintenance, and Monitoring Plan* (Trihydro 2015) and *HSVE Monitoring and Maintenance Manual* (URS 2014).
 - Continue to reconfigure the wellhead and control vaults within select SVE wells, focusing on those wells that contain leaking valves or are situated within SVE Effectiveness Zone 5.



MS. MICHELLE KAYSEN

January 23, 2018

PAGE 4

- Conduct quarterly SVE effectiveness monitoring within the nested vapor monitoring probes and multipurpose monitoring points in accordance with the approved *Effectiveness Monitoring Plan* (URS 2014) in February 2018.
- Conduct quarterly in-home effectiveness monitoring in March 2018 in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Continue weekly in-home effectiveness monitoring within eight structures in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014), and continue monthly in-home effectiveness monitoring within 105 West Cherry Street, 107 West Cherry Street, and 113 West Cherry Street.
- Conduct river stage triggered monitoring in accordance with the triggers established within the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Conduct routine dissolved phase monitoring activities in accordance with the *Final Dissolved Phase Investigation Work Plan* (Trihydro 2013) including: (1) quarterly fluid level gauging, (2) groundwater sampling, and (3) data reduction, analysis, and reporting.
- Participate in routine teleconferences and meetings with the USEPA and Illinois EPA.

We appreciate your continued engagement with this project. If you have any questions or require any additional information, please contact me at (513) 430-1766.

Sincerely,

Paul Michalski, P.G.

Senior Hydrogeologist

cc: Jordy Federko, Apex Oil Company, Inc.
Tom Miller, Illinois Environmental Protection Agency